What is claimed is:

1. A pressure reducing valve comprising:

a housing having a passage therein;

a valve body disposed within the passage in said housing, said valve body having a wall arranged transverse to the passage and dividing the passage into an input side and an output side, the wall having a plurality of openings passing therethrough from the input side to the output side, a portion of the wall between the openings and facing the output side defining a sealing surface;

a piston slideably disposed within the passage in said housing, said piston having a channel passing longitudinally therethrough with a sealing ledge surrounding the channel on a first end thereof, a flange surrounding the channel on a second end thereof, and an annular shoulder surrounding the sealing ledge;

wherein fluid pressure at the input side acts on the shoulder and biases said piston toward the output side and wherein fluid pressure at the output side acts on the flange and biases said piston toward the input side;

wherein when a ratio of pressure at the input side as compared to pressure at the output side is below a threshold value, said piston is biased by pressure at the output side so as to cause the sealing ledge of said piston to seal against the sealing surface of the wall of said valve body such that the input side is isolated from the output side; and

wherein when a ratio of pressure at the input side as compared to pressure at the output side is above the threshold value, said piston is biased by pressure at the input side so as to cause the sealing ledge of said piston to unseal from the sealing surface of the wall of said valve body such that the input side is in communication with

the output side and fluid flows from the input side through the openings in the wall of said valve body and through the longitudinal channel in said piston to the output side.

2. The valve of Claim 1 wherein an effective surface area of the flange is larger than an effective surface area of the shoulder.

3. The valve of Claim 1 wherein the threshold value is a function of an effective surface area of the flange and an effective surface area of the shoulder.

4. The valve of Claim 1 wherein the threshold value is variable by varying at least one of an effective surface area of the flange and an effective surface area of the shoulder.

5. The valve of Claim 1 wherein the plurality of openings passing through the wall of said valve body comprise at least three openings arranged in an annular fashion around a longitudinal axis of the passage.

6. The valve of Claim 1 further comprising a first annular seal disposed between said valve body and a wall of the passage in said housing and a second annular seal disposed between said piston and the wall of the passage in said housing.

7. The valve of Claim 6 further comprising a vent formed in the wall of the passage in said housing, said vent allowing air to flow therethrough as said piston moves relative to said valve body.

8. The valve of Claim 1 wherein said valve body includes a longitudinal channel therein and wherein said piston is slideably disposed within the channel in said valve body.

9. The valve of Claim 1 further comprising an annular seal disposed between said piston and said valve body.

10. The valve of Claim 1 wherein said housing is integrally formed as part of a housing of an air compressor.

11. An air compressor comprising:

a compressor housing having an inlet passage therein adapted to receive pressurized air;

a pressure reducing valve disposed within the inlet passage in said compressor housing, said pressure reducing valve comprising a valve body statically mounted within the inlet passage in said compressor housing and a piston slideably disposed within the inlet passage in said compressor housing, said pressure reducing valve dividing the inlet passage in said compressor housing into an input side and an output side;

wherein fluid pressure at the input side acts on the piston and biases the piston toward the output side and wherein fluid pressure at the output side acts on the piston and biases the piston toward the input side;

wherein when a ratio of pressure at the input side as compared to pressure at the output side is below a threshold value, the piston is biased by pressure at the

output side so as to cause the piston to seal against the valve body such that the input side is isolated from the output side; and

wherein when a ratio of pressure at the input side as compared to pressure at the output side is above the threshold value, the piston is biased by pressure at the input side so as to cause the piston to unseal from the valve body such that the input side is in communication with the output side and fluid flows from the input side through said pressure reducing valve to the output side.

12. The compressor of Claim 11 wherein an effective surface area of a side of the piston facing the output side is larger than an effective surface area of a side of the piston facing the input side.

13. The compressor of Claim 11 wherein the threshold value is a function of an effective surface area of a side of the piston facing the output side and an effective surface area of a side of the piston facing the input side.

14. The compressor of Claim 11 wherein the threshold value is variable by varying at least one of an effective surface area of a side of the piston facing the output side and an effective surface area of a side of the piston facing the input side.

15. The compressor of Claim 11:

wherein the valve body includes a wall arranged transverse to the inlet passage in said compressor housing, the wall having a plurality of openings passing therethrough from the input side to the output side, a portion of the wall between the openings and facing the output side defining a sealing surface; and

wherein the piston has a channel passing longitudinally therethrough with a sealing ledge surrounding the channel on a first end thereof, a flange surrounding the channel on a second end thereof, and an annular shoulder surrounding the sealing ledge.

16. The compressor of Claim 15 wherein the plurality of openings passing through the wall of the valve body comprise at least three openings arranged in an annular fashion around a longitudinal axis of the inlet passage in said compressor housing.

17. The compressor of Claim 15 wherein the valve body includes a longitudinal channel therein and wherein the piston is slideably disposed within the channel in the valve body.

18. The compressor of Claim 17 further comprising an annular seal disposed between the piston and the valve body.

19. The compressor of Claim 11 further comprising a first annular seal disposed between the valve body and a wall of the inlet passage in said compressor housing and a second annular seal disposed between the piston and the wall of the inlet passage in said compressor housing.

20. The compressor of Claim 19 further comprising a vent formed in the wall of the inlet passage in said compressor housing, said vent allowing air to flow therethrough as the piston moves relative to the valve body.

21. An air compressor comprising:

a compressor housing having an inlet passage therein adapted to receive pressurized air;

a pressure reducing valve disposed within the inlet passage in said compressor housing, said pressure reducing valve comprising:

a valve body disposed within the inlet passage in said compressor housing, said valve body having a wall arranged transverse to the inlet passage and dividing the inlet passage into an input side and an output side, the wall having a plurality of openings passing therethrough from the input side to the output side, a portion of the wall between the openings and facing the output side defining a sealing surface; and

a piston slideably disposed within the inlet passage in said compressor housing, said piston having a channel passing longitudinally therethrough with a sealing ledge surrounding the channel on a first end thereof, a flange surrounding the channel on a second end thereof, and an annular shoulder surrounding the sealing ledge;

wherein fluid pressure at the input side acts on the shoulder and biases said piston toward the output side and wherein fluid pressure at the output side acts on the flange and biases said piston toward the input side;

wherein when a ratio of pressure at the input side as compared to pressure at the output side is below a threshold value, said piston is biased by pressure at the output side so as to cause the sealing ledge of said piston to seal against the sealing surface of the wall of said valve body such that the input side is isolated from the output side; and

wherein when a ratio of pressure at the input side as compared to pressure at the output side is above the threshold value, said piston is biased by pressure at the input side so as to cause the sealing ledge of said piston to unseal from the sealing surface of the wall of said valve body such that the input side is in communication with the output side and fluid flows from the input side through the openings in the wall of said valve body and through the longitudinal channel in said piston to the output side.

22. The compressor of Claim 21 wherein an effective surface area of the flange is larger than an effective surface area of the shoulder.

23. The compressor of Claim 21 wherein the threshold value is a function of an effective surface area of the flange and an effective surface area of the shoulder.

24. The compressor of Claim 21 wherein the threshold value is variable by varying at least one of an effective surface area of the flange and an effective surface area of the shoulder.

25. The compressor of Claim 21 wherein the plurality of openings passing through the wall of said valve body comprise at least three openings arranged in an annular fashion around a longitudinal axis of the inlet passage.

26. The compressor of Claim 21 further comprising a first annular seal disposed between said valve body and a wall of the inlet passage in said compressor housing and a second annular seal disposed between said piston and the wall of the inlet passage in said compressor housing.

27. The compressor of Claim 26 further comprising a vent formed in the wall of the inlet passage in said compressor housing, said vent allowing air to flow therethrough as said piston moves relative to said valve body.

28. The compressor of Claim 21 wherein said valve body includes a longitudinal channel therein and wherein said piston is slideably disposed within the channel in said valve body.

29. The compressor of Claim 21 further comprising an annular seal disposed between said piston and said valve body.